We Claim:

1. A system for treating an individual experiencing a chronic physiologic condition that is characterized by abnormal levels of cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators in the blood, the system comprising a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators from blood by selective adsorption, and means for circulating the blood of the individual through the material.

2. A system according to claim 1

further including means for administering an agent to the individual selected to treat the chronic physiologic condition.

3. A system according to claim 1

wherein the means for circulating includes an intravenous catheter.

4. A system according to claim 1

wherein the means for circulating includes an indwelling catheter.

5. A system according to claim 1

wherein the means for circulating includes tubing having a wall impregnated with the material.

6. A system according to claim 1

wherein the means for circulating includes an in-line housing, and

wherein the material is contained within the housing.

7. A system according to claim 1

wherein the means for circulating includes an in-line exchangeable housing, and

wherein the material is contained within the housing.

8. A system according to claim 1

wherein the means for circulating and the

material are sized to be carried with the individual during ambulation.

9. A system according to claim 1

wherein the material is characterized by a Biocompatibility Index of not greater than 14.

10. A system according to claim 9

wherein the Biocompatibility Index is not greater than 7.

11. A system according to claim 1

wherein the material comprises a polymeric material.

12. A system according to claim 11

wherein the polymeric material comprises particles prepared by polymerization or copolymerization of a monomer selected from a group consisting of styrene, ethylstyrene, α-methylstyrene, divinylbenzene, di isopropenyl benzene, trivinylbenzene, and alkyl methacrylate.

13. A system according to claim 11

wherein the polymeric material comprises particles formed from crosslinked polystyrene-type resins having a surface modified to minimize activation of blood complement system.

14. A system according to claim 11

wherein the polymeric material comprises particles formed from a porous hydrophobic divinylbenzene copolymer having a surface modified to include surface exposed functional groups selected from the group of polymers of 2-hydroxyethyl methacrylate, N-vinylpyrrolidine, N-vinylcaprolactame and N-acrylamide.

15. A system according to claim 11

wherein the polymeric material comprises particles formed by polymerization of aromatic divinyl compounds or their copolymerization with aromatic monovinyl compounds in the presence of porogens or mixtures of

porogens with properties close to those of θ-solvents.

16. A system for treating an individual experiencing a chronic physiologic condition comprising

means for diagnosing that the chronic physiologic condition is accompanied by abnormal levels of cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators in the blood,

a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators from blood by selective adsorption, and

means for circulating the blood of the individual through the material to remove cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators.

17. A system according to claim 16

further including means for administering an agent to the individual selected to treat the chronic physiologic condition.

18. A system according to claim 16

wherein the means for circulating includes an intravenous catheter.

19. A system according to claim 16

wherein the means for circulating includes an indwelling catheter.

20. A system according to claim 16

wherein the means for circulating includes tubing having a wall impregnated with the material.

21. A system according to claim 16

wherein the means for circulating includes an in-line housing, and

wherein the material is contained within the housing.

22. A system according to claim 16

wherein the means for circulating includes an in-line exchangeable housing, and

wherein the material is contained within the housing.

23. A system according to claim 16

wherein the means for circulating and the material are sized to be carried with the individual during ambulation.

24. A system according to claim 16

wherein the material is characterized by a Biocompatibility Index of not greater than 14.

25. A system according to claim 24

wherein the Biocompatibility Index is not greater than 7.

26. A system according to claim 16

wherein the material comprises a polymeric material.

27. A system according to claim 26

wherein the polymeric material comprises particles prepared by polymerization or copolymerization of a monomer selected from a group consisting of styrene, ethylstyrene, α-methylstyrene, divinylbenzene, di isopropenyl benzene, trivinylbenzene, and alkyl methacrylate.

28. A system according to claim 26

wherein the polymeric material comprises particles formed from crosslinked polystyrene-type resins having a surface modified to minimize activation of blood complement system.

29. A system according to claim 26

wherein the polymeric material comprises particles formed from a porous hydrophobic divinylbenzene copolymer having a surface modified to include surface exposed functional groups selected from the group of polymers of 2-hydroxyethyl methacrylate, N-vinylpyrrolidine, N-vinylcaprolactame and N-acrylamide.

30. A system according to claim 26

wherein the polymeric material comprises particles formed by polymerization of aromatic divinyl compounds or their copolymerization with aromatic monovinyl compounds in the presence of porogens or mixtures of porogens with properties close to those of θ-solvents.

31. A method for treating an individual experiencing a chronic physiologic condition comprising the steps of

diagnosing that the chronic physiologic condition is accompanied by abnormal levels of cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators in the blood, and

circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

32. A method according to claim 31

further including administering an agent to the individual selected to treat the chronic physiologic condition.

33. A method for treating an individual experiencing rheumatoid arthritis comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

34. A method according to claim 33

further including administering an agent to the individual selected to treat rheumatoid arthritis.

35. A method for treating an individual experiencing emphysema comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

36. A method according to claim 35 further including administering an agent to the individual selected to treat emphysema.

37. A method for treating an individual experiencing asthma comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

38. A method according to claim 37 further including administering an agent to the individual selected to treat asthma.

39. A method for treating an individual experiencing pulmonary failure comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

40. A method according to claim 39 further including administering an agent to the individual selected to treat pulmonary failure.

41. A method for treating an individual experiencing ARDS comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

42. A method according to claim 41 further including administering an agent to the individual selected to treat ARDS.

43. A method for treating an individual experiencing viral hepatitis comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective

adsorption.

44. A method according to claim 43 further including administering an agent to the individual selected to treat viral hepatitis.

45. A method for treating an individual experiencing myocardial ischemia comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

46. A method according to claim 45 further including administering an agent to the individual selected to treat myocardial ischemia.

47. A method for treating an individual experiencing autoimmune disease comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

48. A method according to claim 47 further including administering an agent to the individual selected to treat autoimmune disease.

49. A method for treating an individual experiencing AIDS comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

50. A method according to claim 49 further including administering an agent to the individual selected to treat AIDS.

51. A method for treating an individual exposed to a biological or chemical agent comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory

or anti-inflammatory stimulators or mediators by selective adsorption.

52. A method according to claim 51 further including administering an agent to the individual selected to treat the exposure.

53. A method for treating an individual exposed to anthrax comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

54. A method according to claim 53 further including administering an agent to the individual selected to treat anthrax.

55. A method according to claim 31 or 33 or 35 or 37 or 39 or 41 or 43 or 45 or 47 or 49 or 51 or 53 wherein the material comprises a polymeric material.

56. A method according to claim 55 wherein the polymeric material comprises particles prepared by polymerization or copolymerization of a monomer selected from a group consisting of styrene, ethylstyrene, α-methylstyrene, divinylbenzene, di isopropenyl benzene, trivinylbenzene, and alkyl methacrylate.

57. A method according to claim 55 wherein the polymeric material comprises particles formed from crosslinked polystyrene-type resins having a surface modified to minimize activation of blood complement system.

58. A method according to claim 55 wherein the polymeric material comprises particles formed from a porous hydrophobic divinylbenzene copolymer having a surface modified to include surface exposed functional groups selected from the group of polymers of 2-hydroxyethyl methacrylate, N-vinylpyrrolidine,

N-vinylcaprolactame and N-acrylamide.

59. A method according to claim 55

wherein the polymeric material comprises particles formed by polymerization of aromatic divinyl compounds or their copolymerization with aromatic monovinyl compounds in the presence of porogens or mixtures of porogens with properties close to those of θ-solvents.

60. A method according to claim 31 or 33 or 35 or 37 or 39 or 41 or 43 or 45 or 47 or 49 or 51 or 53

wherein the material is characterized by a Biocompatibility Index of not greater than 14.

61. A method according to claim 60

wherein the Biocompatibility Index is not greater than 7.

62. A system for treating an individual experiencing trauma before onset of septic shock comprising a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators from blood by selective adsorption, and means for circulating the blood of the individual through the material.

63. A system according to claim 62

further including means for administering an agent to the individual selected to treat trauma.

64. A system according to claim 62

wherein the means for circulating includes an intravenous catheter.

65. A system according to claim 62

wherein the means for circulating includes an indwelling catheter.

66. A system according to claim 62

wherein the means for circulating includes tubing having a wall impregnated with the material.

67. A system according to claim 62

wherein the means for circulating includes an

in-line housing, and

wherein the material is contained within the housing.

68. A system according to claim 62

wherein the means for circulating includes an in-line exchangeable housing, and

wherein the material is contained within the housing.

69. A system according to claim 68

wherein the means for circulating and the material are sized to be carried with the individual during ambulation.

70. A system according to claim 62

wherein the material is characterized by a Biocompatibility Index of not greater than 14.

71. A system according to claim 70

wherein the Biocompatibility Index is not greater than 7.

72. A system according to claim 62

wherein the material comprises a polymeric material.

73. A system according to claim 72

wherein the polymeric material comprises particles prepared by polymerization or copolymerization of a monomer selected from a group consisting of styrene, ethylstyrene, α-methylstyrene, divinylbenzene, di isopropenyl benzene, trivinylbenzene, and alkyl methacrylate.

74. A system according to claim 72

wherein the polymeric material comprises particles formed from crosslinked polystyrene-type resins having a surface modified to minimize activation of blood complement system.

75. A system according to claim 72

wherein the polymeric material comprises

particles formed from a porous hydrophobic divinylbenzene copolymer having a surface modified to include surface exposed functional groups selected from the group of polymers of 2-hydroxyethyl methacrylate, N-vinylpyrrolidine, N-vinylcaprolactame and N-acrylamide.

76. A system according to claim 72

wherein the polymeric material comprises particles formed by polymerization of aromatic divinyl compounds or their copolymerization with aromatic monovinyl compounds in the presence of porogens or mixtures of porogens with properties close to those of θ-solvents.

77. A method for treating an individual experiencing trauma before the onset of septic shock comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

78. A method according to claim 77

further including administering an agent to the individual selected to treat trauma.

79. A method for treating an individual undergoing or about to undergo surgery comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

80. A method for treating a burn victim comprising the step of circulating the blood of the burn victim through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

81. A method for treating an individual experiencing a cardiac condition comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory

or anti-inflammatory stimulators or mediators by selective adsorption.

82. A method for treating an individual selected for or having received an organ transplant comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

83. A method for treating an individual selected for or having received reconstructive surgery comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

84. A method for treating an individual experiencing ischemia-reperfusion injury comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

85. A method for treating an individual experiencing "the crush syndrome" comprising the step of circulating the blood of the individual through a material that removes cytokines or other species of pro-inflammatory or anti-inflammatory stimulators or mediators by selective adsorption.

86. A method according to claim 77 or 79 or 80 or 81 or 82 or 83 or 84 or 85

wherein the material comprises a polymeric material.

87. A method according to claim 86

wherein the polymeric material comprises particles prepared by polymerization or copolymerization of a monomer selected from a group consisting of styrene, ethylstyrene, α-methylstyrene, divinylbenzene, di

isopropenyl benzene, trivinylbenzene, and alkyl methacrylate.

88. A method according to claim 86

wherein the polymeric material comprises particles formed from crosslinked polystyrene-type resins having a surface modified to minimize activation of blood complement system.

89. A method according to claim 86

wherein the polymeric material comprises particles formed from a porous hydrophobic divinylbenzene copolymer having a surface modified to include surface exposed functional groups selected from the group of polymers of 2-hydroxyethyl methacrylate, N-vinylpyrrolidine, N-vinylcaprolactame and N-acrylamide.

90. A method according to claim 86

wherein the polymeric material comprises particles formed by polymerization of aromatic divinyl compounds or their copolymerization with aromatic monovinyl compounds in the presence of porogens or mixtures of porogens with properties close to those of θ-solvents.

91. A method according to claim 77 or 79 or 80 or 81 or 82 or 83 or 84 or 85

wherein the material is characterized by a Biocompatibility Index of not greater than 14.

92. A method according to claim 91

wherein the Biocompatibility Index is not greater than 7.